

A Snapshot of Head and Neck Cancer

Incidence and Mortality

Cancers of the head and neck, which include cancers of the oral cavity, larynx, pharynx, salivary glands, and nose/nasal passages, account for approximately 3 percent of all malignancies in the United States. The incidence of head and neck cancer in African Americans has declined over the past two decades and is now nearly equivalent to that in whites. The mortality rate also has decreased among African Americans, but it is still higher than that in whites. The incidence and mortality rates in all populations have been decreasing over the past 20 years.

Tobacco and alcohol use are the most important risk factors for most head and neck cancers. Infection with certain types of human papillomavirus (HPV) causes more than half of all cases of oropharyngeal cancer, a type of head and neck cancer. There is no standard or routine screening test for head and neck cancer. Standard treatments for head and neck cancer include radiation therapy and surgery, and for certain types of head and neck cancer, chemotherapy.

It is estimated that approximately \$3.6 billion¹ is spent in the United States each year on treatment for head and neck cancer.

Source for incidence and mortality data: Surveillance, Epidemiology, and End Results (SEER) Program and the National Center for Health Statistics. Additional statistics and charts are available at the [SEER](#) Web site.

¹ [Cancer Trends Progress Report](#), in 2010 dollars.

Trends in NCI Funding for Head and Neck Cancer Research

The National Cancer Institute's (NCI) investment² in head and neck cancer³ research increased from \$66.2 million in fiscal year (FY) 2007 to \$77.1 million in FY 2009 before decreasing to \$58.2 million in FY 2011. In addition to this funding, NCI supported \$13.8 million in head and neck cancer research in FY 2009 and 2010 using funding from the American Recovery and Reinvestment Act (ARRA).⁴

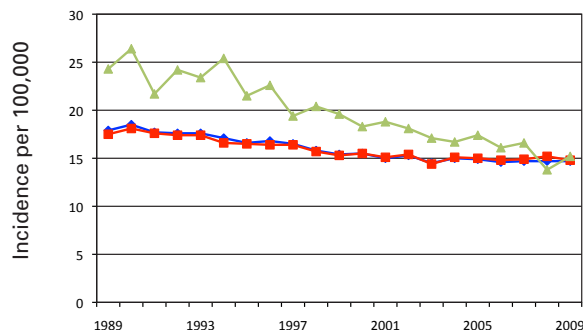
Source: NCI [Office of Budget and Finance](#).

² The estimated NCI investment is based on funding associated with a broad range of peer-reviewed scientific activities. For additional information on research planning and budgeting at the National Institutes of Health (NIH), see [About NIH](#).

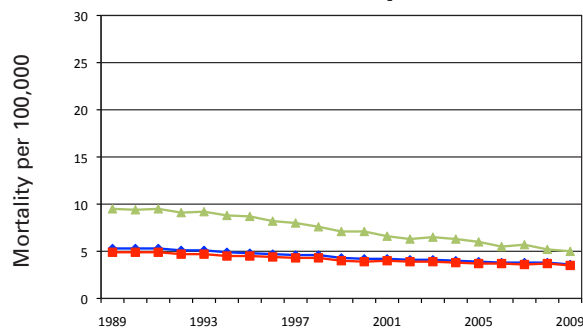
³ FY 2007–2009 head and neck cancer funding includes thyroid cancer funding.

⁴ For more information regarding ARRA funding at NCI, see [Recovery Act Funding at NCI](#).

U.S. Head and Neck Cancer Incidence

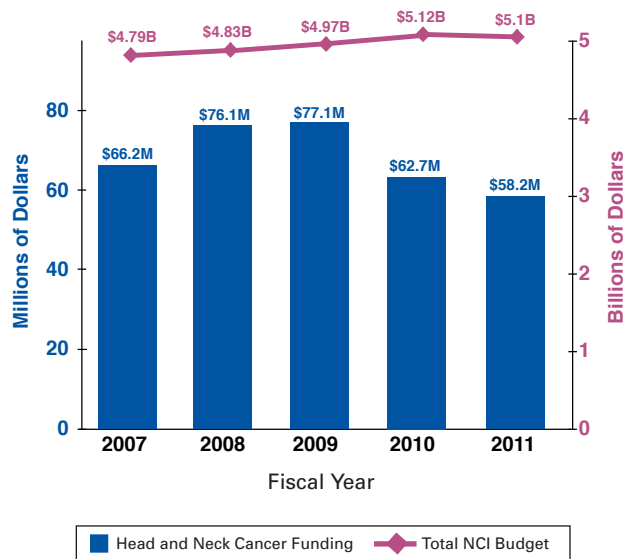


U.S. Head and Neck Cancer Mortality



◆ Overall ■ White ▲ African American

NCI Head and Neck Cancer Research Investment

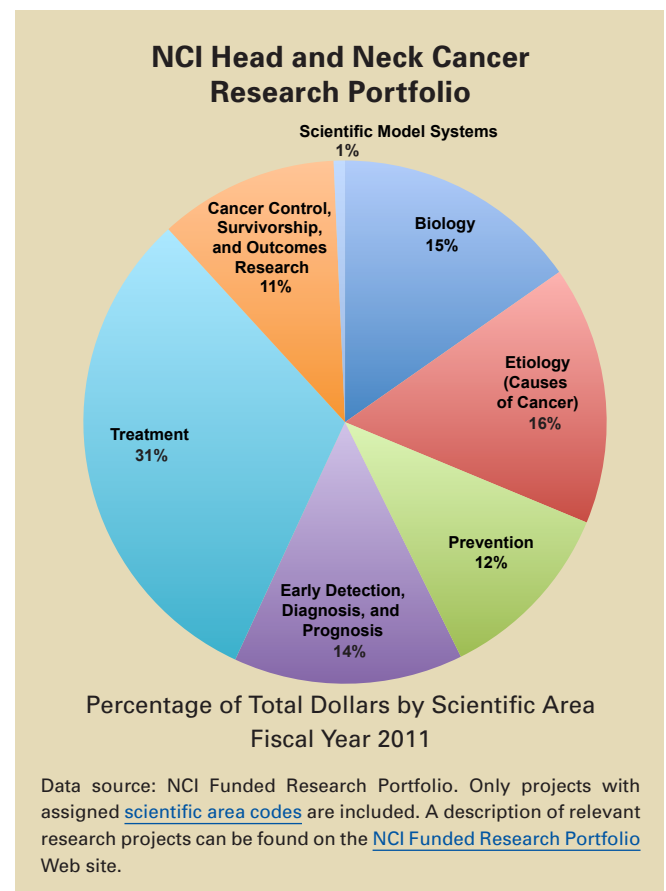


Examples of NCI Activities Relevant to Head and Neck Cancer

- The [Prevention Agents Program](#) provides scientific and administrative oversight for [chemoprevention](#) agent development from preclinical research to early [phase I clinical trials](#). The program currently supports research on six agents for potential chemoprevention of head and neck cancer.
- The [Cancer Genome Atlas \(TCGA\)](#) researchers are systematically identifying the major [genomic](#) changes involved in cancer using state-of-the-art genomic analysis technologies. TCGA is now investigating more than 20 cancer types, including cancers of the head and neck. TCGA researchers are hoping to determine whether genomic changes are different between metastatic and nonmetastatic head and neck tumors and to identify genomic differences associated with age, smoking history, and HPV infection.
- The [International Head and Neck Cancer Epidemiology Consortium](#) facilitates collaborative research on the [epidemiology](#) of head and neck cancer.
- NCI supports studies that explore [Biomarkers of Infection-Associated Cancers](#), including a project that is examining whether the oral microbiome is associated with the risk of upper [aerodigestive squamous cell cancers](#) (oral, pharyngeal, laryngeal, and esophageal squamous cell cancers).
- The [Phase III Randomized Study of Radiotherapy with Cisplatin or Cetuximab in Patients with Human Papilloma Virus-Associated Oropharyngeal Cancer](#) is the first randomized clinical trial specifically targeting HPV-positive patients with oropharyngeal cancer, who may benefit more than HPV-negative patients from radiation plus cetuximab therapy.
- Five [Specialized Programs of Research Excellence \(SPOREs\)](#) in head and neck cancer support translational research on cancers of the upper aerodigestive tract and thyroid cancer. SPORE researchers are addressing markers of genetic susceptibility of head and neck cancer and novel therapies for treatment and prevention.

Additional Resources

- The [What You Need To Know About™ Oral Cancer](#) and [What You Need To Know About™ Cancer of the Larynx](#) booklets contain information about possible causes, symptoms, diagnosis, and treatment options for head and neck cancers. Information specialists also can answer questions about cancer at 1-800-4-CANCER.
- The NCI [Head and Neck Cancer Home Page](#) provides up-to-date information on head and neck cancer treatment, prevention, genetics, causes, screening, testing, and related topics.
- The [Head and Neck Cancers Fact Sheet](#) provides information about causes, risks, symptoms, diagnosis, treatments, supportive care, and rehabilitation options for head and neck cancers.
- Information on treatment options for [laryngeal](#), [lip and oral cavity](#), [oropharyngeal](#), [hypopharyngeal](#), [nasopharyngeal](#), [paranasal sinus and nasal cavity](#), and [salivary gland](#) cancers is available from PDQ, NCI's comprehensive cancer database.
- [Clinical trials](#) for [laryngeal](#), [lip and oral cavity](#), [oropharyngeal](#), [hypopharyngeal](#), [nasopharyngeal](#), [paranasal sinus and nasal cavity](#), and [salivary gland](#) cancers can be found in NCI's list of clinical trials.



Selected Advances in Head and Neck Cancer Research

- Using high-throughput sequencing, researchers identified a number of [gene defects implicated in head and neck squamous cell carcinoma](#), including two genes that had not been known to play a role in head and neck squamous cell carcinoma. Published July 2011.
- A case-control study found that [nicotine dependence as indicated by time to first cigarette upon waking is linked to increased risk of head and neck cancers](#). Published August 2011.
- A study of tumor samples collected by three population-based registries from 1984 to 2004 revealed that the [incidence of HPV-positive oropharyngeal cancers is on the rise](#) and that the survival of patients with HPV-positive cancers is much longer than those with HPV-negative tumors. Published October 2011.
- Researchers found that [6.9 percent of Americans have an oral human papillomavirus \(HPV\) infection](#), which can cause oropharyngeal cancer; men are more likely to be infected than women. Published January 2012.
- Click [here](#) to access selected free full-text journal articles on advances in NCI-supported research relevant to head and neck cancer. Click [here](#) to search for additional scientific articles or to complete a [search tutorial](#) on PubMed.